BASIC FUNCTIONS   Software Version 4.01

⬇ Items marked SY are only available when the SY-88 is installed.

	Function	Display LED		To Enter Function	To Enter Data	Remarks
1	Display ABS Time	ABS		Hold DISPLAY + ▲	-	-
2	Display H:M:S:F TC difference	DIFF	SY	DISPLAY	-	-
3	Display Sub-Frame difference	"	SY	DISPLAY	-	Press ▲ to return to H:M:S:F display
4	Auto Offset Calculate & Store	"	SY	DISPLAY	▲ and ▼	Time code offset only
5	Display Generator Start Time & Enter Data	GEN	SY	DISPLAY	▲ or ▼	-
6	Column by column Generator or Offset time Setting	GEN or OFFSET		Hold ▲ and ▼ then press DISPLAY	▲ or ▼	A period will start blinking in the Hours column, use ▲ or ▼ to enter hours. Press DISPLAY to move the period to next column. After setting last column, pressing DISPLAY will exit column setting mode
7	Display MEMO 1 & Enter data	MEMO 1		DISPLAY	▲ or ▼	By pushing MEMO 1, point can be set on the fly
8	Display MEMO 2 & Enter data	MEMO 2		DISPLAY	▲ or ▼	By pushing MEMO 2, point can be set on the fly
9	Display OFFSET & Enter data	OFFSET		DISPLAY	▲ or ▼	ABS time Offset entry in Frames only.
10	Display OFFSET & Enter Data	"	SY	DISPLAY	▲ or ▼	SMPTE T/C Offset entry in Frames, or when DISPLAY is pressed again, in Sub-Frames.
11	Display PITCH & Enter data	PITCH		DISPLAY or VARI	▲ or ▼	-
12	Display Tape Time Code	TC	SY	Hold DISPLAY + ▼	-	-
13	Display User Bits on tape		SY	Hold ▼ + DISPLAY	-	TC LED will flash
14	Display Incoming Time Code	"	SY	Hold ▲ + Display	-	TC LED will flash. Press DISPLAY to exit.
15	Pull Up / Down mode setting	"	SY	Hold ▲ and press Fs	▲ or ▼	Press DISPLAY to exit
16	Display Pull Up / Down Status	Any	SY	Press Fs button	-	Display will exit automatically

Basic Functions cont.   Software Version 4.01

↓ Items marked SY are only available when the SY-88 is installed.

	Function	Display LED		To Enter Function	To Enter Data	Remarks
17	Slave reference, Time Code or ABS time	ABS	SY	Press ▲ & ▼	▲ or ▼	Press DISPLAY to exit
18	Digital or Analog output mode selection			Hold ▲ press Digital In	-	This sets a 43Fs delay on all 8 tracks for digital dubbing. Display will exit automatically
19	Track Delay			Hold ▲ press DISPLAY	▲ or ▼	Press Track Assign to select track to delay. Press DISPLAY to exit
20	ALL Track Delay			Hold ▲ press DISPLAY then Hold Rec. for track 1 & press Rec. for track 2	▲ or ▼	If no change is made, individual track delay values are retained. Press DISPLAY to exit
21	Crossfade			Hold ▼ press DISPLAY	▲ or ▼	Press DISPLAY to exit
22	Shuttle Monitor Mode			Hold ▲ press SHUTTLE	▲ or ▼	When ON this will mute all tracks not in Rec Ready when in shuttle mode. Rec Ready tracks will switch to Input. Press DISPLAY to exit
23	OFFSET Tally, On / Off			Hold ▲ press CHASE	▲ or ▼	Press DISPLAY to exit
24	Punch In point Display & Modify	MEMO 1		Perform Rehearsal	▲ or ▼	Press DISPLAY + ▲ to Exit or DISPLAY to go to Punch out point
25	Punch Out point Display & Modify	MEMO 2		Perform Rehearsal	▲ or ▼	Press DISPLAY + ▲ to Exit
26	Display Preroll and Enter or modify data	ABS		Press ▲ & ▼ when Rehearsal or Auto In LED is blinking or On	▲ or ▼	Press DISPLAY + ▲ to Exit
27	Greeting	ABS		In TEST mode Hold ▲ + ▼ + DISPLAY + and press remote. Release ▲ & ▼ first then DISPLAY	▲ or ▼ and DISPLAY	Use ▲ or ▼ to scroll through letters. Press DISPLAY after each correct letter. Press ▲ & ▼ when done to Exit message mode. Reboot.
28	Display Errors	Any		Press REMOTE button when in TEST mode	-	Track Meters 1 & 2 show Block Error Rate in real time for playback heads A & B
29	Enter SY-88 Menu System	TC	SY	Press ▲ & ▼	-	This enters the SY-88 Menu system
30	Exit SY-88 Menu System	"	SY	Hold DISPLAY press ▼	-	This will exit SY-88 Menu system
31	Chase Record Enable	ABS		Hold ▲ press TC Rec button	▲ or ▼	Allows front panel Record command on slave units. Must have SYS version.34.02
32	20dB or 16dB Headroom Select	ABS		Hold press ALL INPUT	▲ or ▼	Requires Modification & SYS ver 61.03

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SY-88 MENU FUNCTIONS   Software Version 4.01

These items are available after you enter the SY-88 Menu System by switching display to TC and pressing ▲ and ▼ simultaneously. Once in the Menu System, pressing DISPLAY will scroll forward through the Menu Items. Holding DISPLAY and pressing ▲ will scroll back to the previous Menu items,   Holding DISPLAY and pressing ▼ will exit the Menu system.

Item No	Display			Description			Dip Sw
	Item	Choices		Item	Setting		
		Default			Default		
1		Select DA-88 Time Base		Select operating Frame rate: 30 ndF, 29 ndF, 29 dF, 25 F and 24 F			
2	t	Display Only		Displays Frame Rate of time code recorded on tape			
3	t.out	tc	Abs	ABS to TC conversion	off	on	
The following menus are available DA-88 SYS Ver 3.10 or later, and SY-88 Ver 4.01 **S1-#2 Must be in the down position for 9-pin control**							
4	ChS	rEch	FrEE	Chase Mode	rechase	free	S1 #3
5	vSync	OFF	on	Video Sync	Off	On	S1 #7
6	tCt.	AnLG	dGEL	Time code timing	analog	digital	S1 #5
7	rEnt.	EnA	dSA	9-pin Remote control	Enable	Disable	
8	d.	Device Type (See table 2)		9 pin device Ack.	(See Table 2)		S3 #1,2,3
9	rcdLy.	Record delay (See Manual)		Record Delay	See Manual for settings		
10	trKArm.	on	oFF	Track arming	enable	disable	S3 #7
11	tm.	Track Mapping (See Table 3)		Track Mapping	See Table 3 for settings		S3 #4&5
12	Shtmute	0	1	Shuttle Mute	don't mute	mute	
13	FASt.	8	100	Fast wind speed	X8	X100	S3 #6
14	CutLy.	StP	StL	Cue up tally	Stop	Still	S3 #8
15	morE…	0	1	More Menu	No	Yes	
The following Menu items are available only when item 15, more is set to 1							
16	v.	Example 4.01. 3		Software Version (Display only)			
17	rEchwd.	1	2	Rechase Window	1 second	2 seconds	S1 #4
18	vsy.	FrEE	rESy	Video re-Sync mode	Free	Re-Sync	
19	LtC.	LEAP	5F	LTC mode	leap	5 frames	S1 #8
20	tCrEc	0	1	9-pin TC record enable	Disable	Enable	
21	PSP.	mute	on	Pgm Spd Play mode	mute	don't mute	
22	rESEt			Reset to factory defaults			
23	rEAd			Read current hardware switch settings			

SY-88 MENU FUNCTION Tables

Table 2. 9-pin Device Types

Device Type		DIP SWITCH		
Display	Model	S3 #1	S3 #2	S3 #3
PCñ7050	PCM-7050	0	0	0
bōH3000	BVH-3000	1	0	0
bōU950	BVU-950	0	1	0
bōU-75	BVW-75	1	1	0
PCñ8000	PCM-800	0	0	1
bōH2000	BVH-2000	1	0	1
dūr-10	DVR-10	0	1	1
ERSCAñ	TASCAM	1	1	1

Table 3. Track Mapping

Track specified by commands ↓	S3#4 = 0		S3#4 = 1 (Pair mode)				← DIP switch
			S2#6 = 0		S2#6 = 1		
	S3#5 = 0	S3#5 = 1	S3#5 = 0	S3#5 = 1	S3#5 = 0	S3#5 = 1	
	A 14d 14 / A44d14	d 1-8 / d1-8	P 15A / P15A	P 12A / P12A	P 15d / P15d	P 12d / P12d	← Menu display
analog 1	1		1&6	1&2			
analog 2	2		2&6	3&4			
analog 3	3		3&7	5&6			
analog 4	4		4&8	7&8			
digital 1	5	1			1&5	1&2	
digital 2	6	2			2&6	3&4	
digital 3	7	3			3&7	5&6	
digital 4	8	4			4&8	7&8	
digital 5		5					
digital 6		6					
digital 7		7					
digital 8		8					
	† DA-88 TRACK						

7-segment Characters

0	0	A	A	K	ʮ	U	U,u
1	1	B	b	L	L	V	ū
2	2	C	C,c	M	ñ	W	ʮ
3	3	D	d	N	n	X	ʮ
4	4	E	E	O	o,0	Y	y
5	5	F	F	P	P	Z	ʮ
6	6	G	G	Q	q	SP (space)	
7	7	H	H,h	R	r	(minus/ hyphen)	-
8	8	I	ı,1	S	5,5	(equal sark)	=
9	9	J	J	T	t,7	(under- line)	_

DA-88 Power up sequences

System version 3.10 and up

Hold the following keys in combination while powering on the DA-88.

REW	FF	STOP	PLAY	REC	▼	▲	RESULT
					■	■	Cleaning Mode. With ABS display selected, If ▼ and ▲ are pressed again, the number of cleaning cycles is displayed.
		■					POWER ON STOP
			■	■			VERSION RELEASE DATE
		■	■				D TIME
	■	■					DS TIME
	■		■				BOT STOP (at Beginning of Tape enter Stop mode)
■		■					EOT STOP (at End of Tape enter Stop mode)
		■	■	■			SYS VERSION
	■		■	■			SY-88 VERSION
■		■		■			PEAK HOLD ON (▲+ Clear to reset)
■			■	■			PEAK HOLD OFF
	■	■	■				TEST MODE (when stop is pressed again)
■		■	■				EOT REWIND (at End of Tape enter Rewind mode)
■	■	■					SERVO VERSION
■	■		■				BOT PLAY (at Beginning of tape enter Play mode)
■	■	■	■				POWER ON PLAY

DA-88 ERROR NUMBERS AND THEIR DESCRIPTION

ERROR	DESCRIPTION
S-Err-01	Mechanical Problem (tape path, guide, drum motor, etc.)
S-Err-02	Irregular head drum speed. The drum motor spin command is given, but no tachometer pulses from the frequency generator (FG) coil are received for 1.5 seconds. This can happen if the tape has come in contact with lubricant from the mechanism. The Bernoulli effect explains how a spinning drum creates a cushion of air between the tape and the heads. The lubricant, however, will stop the head dead in its tracks.
S-Err-03	Combination of Errors 1 & 2
S-Err-04	Capstan Motor Problem. The motor spin command is given, but no FG signal is detected within 1.5 seconds.
S-Err-05	Combination of Errors 1 & 4
S-Err-06	Combination of Errors 2 & 4
S-Err-07	Combination of Errors 1,2 &4
S-Err-08	Reel Problem (take-up or supply). No FG received from either reel table for 1.5 seconds.
S-Err-09	Combination of Errors 1 & 8
S-Err-10	Combination of Errors 2 & 8
S-Err-11	Combination of Errors 1,2 & 8 (a mechanical mode change is not completed within 5 seconds).
S-Err-12	Combination of Errors 4 & 8
S-Err-13	Combination of Errors 1,4 & 8
S-Err-14	Combination of Errors 2,4 & 8
S-Err-15	Combination of Errors 1,2,4 & 8
S-Err-21	The reel tables do not wind the tape in preparation for Eject.
S-Err-31	The tape is loose or caught. Tape width varies within a specified tolerance. If the tape path has been adjusted for a narrow or easily flexed tape, a wider or stiffer tape may get caught in the guides. The System control monitors both reel table tachometers, as well as the Head and Capstan tachs. Any conflicting information will halt the transport.
S-Err-41	The solenoid does not engage during FF/RW (100x speed).
S-Err-59	In Eject mode, the reels do not start to drive, or do not lock for more than 1.5 seconds
S-Err-68	In Play mode, the reels do not start to drive, or do not lock for more than 1.5 seconds.
E.CLOCK	No clock data, or incorrect setting of the clock switch or machine time base reference. This could also indicate a mismatch in the machine ID numbers and/or missing sync signal such as video or word clock.
E.t cut	The tape is broken.
Ed io	Digital I/O error. No digital device is detected at the T-DIF port. Check to see if cables are connected and power is on. You must use TASCAM cables or other individually shielded twisted pair cable.
E.dE	Dew sensor has detected condensation on the head drum. This occurs when a machine is brought from a cold to a warm area. Leave the machine powered so the heat from the electronics will evaporate the moisture.
E.HI-8.t	The tape is not a HI-8 formulation. You must use either a metal particle (MP) or metal evaporated (ME) HI-8 Tape.
E.thin.t	The tape inserted is too thin. Use a 90 or 120 minute tape.
Clearing Errors	Generally Errors can be cleared by re-booting the machine. However some errors require the machine be serviced immediately. This is usually the case with S-Err-11, as the tape could be locked in the transport.

DA-88 Cleaning Procedure

The DA-88 incorporates an internal cleaning mechanism that not only cleans the rotary head but also the tape as it enters the tape path.

The inclusion of this cleaning mechanism significantly reduces the need for manual cleaning, and all but eliminates the need to use the dry cleaning tape. Use of the dry cleaning tape will reduce the head life of the DA-88 by approximately 5 hours for every cleaning cycle, use is therefor reserved for situations when playback errors occur and a manual cleaning is not possible. If you elect to use the dry cleaning tape, RUN ONE PASS ONLY - NOT MULTIPLE CYCLES. If this does not resolve the situation, a manual cleaning or alignment is required.

The following is a suggested maintenance schedule.
    Note that the cleaning interval may be longer or shorter depending on your individual environmental conditions.

    350 to 400 hours: Perform manual cleaning of heads and guides.
                             Check tape path alignment after cleaning.
                             (requires proper test and measurement equipment, and should be performed by qualified service personnel)

    During third cleaning, (1000 hours) a complete alignment check is suggested.

Remember, the duration between cleanings may vary depending on your environment. A dusty or smokey environment will shorten the cleaning cycle.

Although most name brand tapes are of very high quality, it is possible to receive some "bad" stock.   Most notably stock which exhibits excessive shedding. If you receive tape stock that sheds, immediately stop using it, and clean you transport.

DA-88 Digital Dubbing

Requirements:

  1 PW-88S Sync Cable
  1 PW-88D Digital Dubbing Cable
  1 RCA to RCA audio cable. (If dubbing Time code) ✳
  2 DA-88s (Both must have SY-88 Sync cards if dubbing Time code) ✳
  1 Pre-Formatted tape.

Procedure:
  1) With power off, connect Source DA-88 SYNC OUT to Target DA-88 SYNC IN using the PW-88 Sync cable.

  2) With Power off, connect Source DA-88 DIGITAL I/O port to Target DIGITAL I/O port using the PW-88D Digital Dubbing cable.
✳   If dubbing Time code, connect TC Out from source DA-88 to TC In on the target DA-88 using the RCA to RCA audio cable.
  3) Power On both DA-88s
  4) On the Source DA-88, enter a 43 Fs Track Delay value for all 8 tracks.
        a) Press DISPLAY until ABS is selected.
        b) Hold the ▲ and press DIGITAL IN. The display will toggle between Analog and Digital. Select DIGITAL.
✳   c) If dubbing Time code, on Source DA-88 set menu Item 6 to Digital (old S1 #5 Up).
  5) Load Master tape into Source DA-88 and the pre-formatted tape into the target DA-88.
NOTE: Make certain that the master tape is WRITE PROTECTED.
  6) Make certain that the REC FUNCTION switches on the Source DA-88 are **NOT ENGAGED.**
  7) Engage REC FUNCTION switches on the Target DA-88 to arm all tracks.
✳   If dubbing Time code, engage the TC REC FUNCTION switch, but **DO NOT** start the generator.
  8) Rewind both tapes to BOT
  9) On the Target DA-88, engage DIGITAL IN, and CHASE.
  10) On the Source DA-88, hold RECORD and press play.